AWARD
African Wo men in Agricultural Research and Development

Profile

Caroline Mwongera
2015 AWARD Fellow

Position	Post-doctoral Scientist
Institution	International Center for Tropical Agriculture (CIAT)
Country	Kenya
PhD	Biology, Montpellier SupAgro, France, 2012
Mentor	Jemimah Njuki, Senior Program Officer, Agriculture and Food Security, Canada's International Development Research Centre
Research Area	Analysis of trade-offs and impacts of adoption of Climate Smart Agriculture technologies in mixed crop-livestock systems.

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Caroline Mwongera grew up in Meru, Kenya, as the firstborn in a family of three children. She and her brothers worked on the family's small-scale farm, an enterprise she felt was "a waste of time". She especially felt that livestock keeping was not worth it because it was labor intensive with poor returns. While studying agriculture in high school she recognized the gap, and felt that some of the principles she learned should be used in agriculture. "I wanted to be the person to bridge the research gap, by bringing good knowledge and skills to farmers," she says.

Mwongera therefore chose a career in agriculture, beginning with a BSc in Botany and Zoology from Egerton University and a master's in Seed Science and Technology from Moi University.

Mwongera's master's project was sponsored by the Seed Trade Association of Kenya. The seed testing and certification in the country, as stipulated in the Seed and Plant varieties Act did not take into account variations in storage conditions. She therefore worked to determine seed viability and vigor of common vegetable species in a range of locations with varying temperature and relative humidity. The results of her work provided scientific evidence of the effects of different storage conditions on the shelf life of seeds.

Smallholder farmers account for about 80 percent of all farms in Kenya. Mwongera's vision is highly productive, economically viable, and climate-resilient farming systems. Whatever enterprise the farmer engages in—crop, livestock, or fish based—the whole family should have a decent livelihood from the enterprise.

With this goal in mind, Mwongera undertook a PhD looking at how smallholders cope with climate variability. "I found that much of the traditional knowledge farmers have is passed down through generations," she says. "But the climate is changing faster than farmers can adjust, and they are finding it difficult to keep up." The promotion and rapid diffusion of maize production in Kenya in the 1970s at the expense of sorghum and millet in the drylands resulted in increased risk of crop losses to drought in quite a number of regions.

Marginal area crops, being perceived as "the crop of the poor people" meant that these crops were abandoned in favor of maize, the "urban" food. Mwongera encouraged farmers to use improved varieties of crops adapted to semi-arid areas so that yields would be guaranteed. The policy implications of this study was to provide improved varieties of agro-ecologically adapted species as well as skills on technologies to foster adaptation to climate change.

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Mwongera, a post-doctoral scientist at CIAT, is currently identifying the locally appropriate climate smart technologies and training farmers how to implement. She is also conducting trade-off analysis, evaluating impacts (economic, social, environmental) of existing policies on the adoption of climate-smart agriculture practices. The project has developed the Climate Smart Agriculture Rapid Appraisal (CSA-RA) tool for prioritization of climate-smart agriculture across diverse landscapes.

Mwongera hopes to make a difference in communities with her research and expects the AWARD Fellowship to help her develop the leadership and management skills she needs to achieve this goal and advance in her career. She looks forward to mentoring younger scientists and to being more efficient and productive in her work.

She likes to be on the farm and feels the product of her research should end up with farmers. "I tick when I'm with farmers, out in the fields, not when in the office," says Mwongera. "My end game is that the impact of my research should be felt by farming families."

AWARD is a career-development program that equips top women agricultural scientists across sub-Saharan Africa to accelerate agricultural gains by strengthening their research and leadership skills through tailored fellowships. AWARD is a catalyst for innovations with high potential to contribute to the prosperity and well-being of African smallholder farmers, most of whom are women.

AWARD is generously supported by the Bill & Melinda Gates Foundation, the United States Agency for International Development and the Alliance for a Green Revolution in Africa. For more information, visit www.awardfellowships.org